

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (currently amended): A method of secure communication of an electronic document from a sender to a recipient, verification of sending of the electronic document by the sender and verification of the receipt of the electronic document by a recipient, in association with at least one third party, comprising the steps of:

the sender generating a ~~substantially unique and substantially undecryptable~~ first hashed digital string based upon said electronic document and communicating said first hashed digital string to said at least one third party;

the sender encrypting first and second unencrypted portions of said electronic document with respective first and second encryption algorithms thereby generating respective first and second encrypted portions and communicating said first and second encrypted portions to said at least one third party;

said at least one third party ~~notifying said recipient of said first and second encrypted portions and, in response to a request from said recipient,~~ communicating said first and second encrypted portions to said recipient;

said recipient using a first decryption algorithm thereby generating said first unencrypted portion;

said at least one third party, in response to a key request from said recipient, communicating to said recipient said first hashed digital string and a decryption key for

decrypting output of said second encryption algorithm, said key request being recorded by said at least one third party as evidence of receipt of said electronic document by said recipient; and

said recipient using said decryption key to generate said second unencrypted portion, said recipient further generating a ~~substantially unique and substantially undecryptable~~ second hashed digital string based upon said first and second unencrypted portions of said electronic document and comparing said first hashed digital string to said second hashed digital string.

2. (currently amended): The method of claim [[1]] 23 wherein said step of communicating said first hashed digital string to said at least one third party further includes the step of communicating a first number identifying the sender and a second number identifying the recipient.

3. (currently amended): The method of claim 2 wherein said step of communicating said first hashed digital string and said step of communicating a first number and a second number further includes the step of the sender encrypting said first hashed digital string, said first number and said second number by a third encryption algorithm.

4. (original): The method of claim 3 wherein said third encryption algorithm is an asymmetric encryption algorithm employing an asymmetric encryption key and an asymmetric decryption key associated with said at least one third party.

5. (original): The method of claim 1 wherein said second encrypted portion is generated by encrypting said second unencrypted portion by the second encryption algorithm and said first

encryption algorithm and wherein said step of said recipient using a first decryption algorithm further includes using the first decryption algorithm on said second encrypted portion.

6. (currently amended): The method of claim 1 further including the step of the recipient communicating a message ultimately destined for the sender indicating results of the step of comparing said first hashed digital string to said second hashed digital string.

7. (currently amended): A method for a recipient to receive and decrypt an encrypted electronic message and verify receipt and decryption thereof, comprising the steps of:

~~requesting communication of~~ receiving said encrypted electronic message and a message identifying number ~~in response to notification of said encrypted electronic message~~, said electronic message including a first encrypted document portion encrypted by at least a first encryption algorithm and a second encrypted document portion encrypted by at least a second encryption algorithm, said first encryption algorithm being different from said second encryption algorithm;

decrypting said first encrypted document portion to obtain a first decrypted document portion;

transmitting a key request for a decryption key for said second encryption algorithm, said key request including said message identifying number, said key request further serving as evidence of receipt of said electronic message and decryption of said first encrypted document portion;

receiving said decryption key in response to said transmitting step, and further receiving a ~~substantially unique and substantially undecryptable~~ first hashed digital string based upon said encrypted electronic message prior to encryption;

decrypting said second encrypted document portion using said decryption key to obtain a second decrypted document portion;

generating a ~~substantially unique and substantially undecryptable~~ second hashed digital string based upon said first and second decrypted document portions, said first and second decrypted document portions intended to comprise decryption of said encrypted electronic message;

comparing said first hashed digital string to said second hashed digital string; and

transmitting a message indicating a result of said comparing step, further serving as evidence of decryption of said encrypted electronic message.

8. (currently amended): The method of claim [[7]] 24 wherein said requesting step is performed in response to manual input by the recipient.

9. (currently amended): The method of claim [[7]] 21 wherein said second portion of the encrypted message is further encrypted by the first encryption algorithm using said first encryption key, and wherein said step of decrypting said first encrypted document portion further includes said portion of the encrypted message thereby removing one level of encryption on said second portion of the encrypted message.

10. (currently amended): A method for establishing an evidentiary trail substantially establishing that a recipient has received an encrypted message and decrypted the encrypted message, comprising the steps of:

~~recording that the recipient has been notified of the encrypted message;~~

~~recording that the recipient has requested the encrypted message;~~

recording that the encrypted message has been communicated to the recipient, said encrypted message including a first encrypted portion and a second encrypted portion, wherein the first encrypted portion has been encrypted by at least a first encryption algorithm and the second encrypted portion has been encrypted by at least a second encryption algorithm, wherein the recipient uses a first decryption key to decrypt the first encrypted portion, but must receive a second decryption key to decrypt the second encrypted portion;

recording that the recipient has requested said second decryption key associated with the encrypted message;

recording that the recipient has received said second decryption key associated with the encrypted message and has further received a ~~substantially unique and substantially undecryptable~~ first hashed digital string based upon said encrypted message prior to encryption; and

recording that the recipient has transmitted a message verifying that said decryption key has been received, that said second encrypted portion has been decrypted and that the recipient generated a ~~substantially unique and substantially undecryptable~~ second hashed digital string based on decryption of said encrypted message which matches said ~~substantially unique and substantially undecryptable~~ first hashed digital string.

11. (currently amended): The method of claim [[10]] 25 wherein said step of recording that the encrypted message and a message identifying number has been communicated to the recipient further includes the step of recording that said first encryption key has been communicated to the recipient.

12. (original): The method of claim 11 wherein said step of recording that the encrypted message has been communicated to the recipient further includes the step of recording that a message identifying number has been communicated to the recipient.

13. (original): The method of claim 12 wherein said step of recording that the recipient has requested said second decryption key further includes the step of recording that the recipient has transmitted said message identifying number.

14. (original): The method of claim 10 wherein said second portion of the encrypted message is further encrypted by the first encryption algorithm using said first encryption key.

15. (currently amended): A method of establishing an evidentiary trail substantially establishing that a sender has transmitted an encrypted message, the evidentiary trail substantially establishing contents of the encrypted message prior to encryption while substantially maintaining confidentiality of the undecrypted contents of the encrypted message, comprising the steps of:

recording that the sender has communicated a ~~substantially unique and substantially undecryptable~~ hashed digital string based upon said encrypted message prior to encryption and a number identifying an intended recipient;

recording that the sender has received a first encryption key, a second encryption key, a third encryption key, a document identification number substantially unique to the encrypted message, and encrypted version of said identification number, said hashed digital string; and

recording that the sender has communicated said encrypted message comprising a first portion of the encrypted message encrypted by at least a first encryption algorithm using said first encryption key and a second portion of the encrypted message encrypted by at least a second encryption algorithm using said second encryption key; and has further communicated said number identifying the intended recipient, said document identification number, and said third encryption key.

16. (currently amended): The method of claim [[16]] 15 wherein said step of recording that the sender has received a first encryption key further includes the step of recording that the sender has received an identification number associated with the encrypted message, and a third encryption key associated with the recipient.

17. (currently amended): The method of claim [[17]] 16 wherein said step of recording that the sender has communicated said encrypted message further includes the step of recording that the sender has communicated a title associated with said encrypted message.

18. (currently amended): The method of claim [[18]] 17 further including the step of recording that the sender has received a message indicating status of reception and decryption of said encrypted message by the intended recipient.

19. (original): The method of claim 15 wherein said second portion of the encrypted message is further encrypted by said first encryption algorithm using said first encryption key.

20. (new) The method of Claim 1 wherein said step of said at least one third party communicating said first and second encrypted portions to said recipient is performed in response to a data request from said recipient to said at least one third party, said data request being recorded by said at least one third party.

21. (new) The method of Claim 7 wherein said step of receiving is preceded by a step of requesting communication of said encrypted electronic message and a message identifying number in response to notification of said encrypted electronic message.

22. (new) The method of Claim 10 wherein step of recording that the encrypted message has been communicated to the recipient is preceded by and in response to the steps of:
recording that the recipient has been notified of the encrypted message; and
recording that the recipient has requested the encrypted message.

23. (new) The method of Claim 20 wherein said key request includes said first unencrypted portion generated by said first decryption algorithm.

24. (new) The method of Claim 21 wherein said key request includes said first decrypted document portion.

25. (new) The method of Claim 22 wherein said step of recording that the recipient has requested said second decryption key further includes recording that the recipient has transmitted a decrypted result of said first encrypted portion.

26. (new) The method of Claim 1 further including the step of storing said decryption key and said first unencrypted portion of said electronic document into a registry of said at least one third party prior to said step of said at least one third party communicating said first and second encrypted portions to said recipient.

27. (new) The method of Claim 10 further including the step of recording said decryption key and an unencrypted version of said first encrypted portion prior to said step of recording that the encrypted message has been communicated to the recipient.

28. (new) The method of Claim 26 wherein said step of storing said decryption key and said first unencrypted portion of said electronic document into a registry of said at least one third party serves as evidence of contents of said message.

29. (new) The method of Claim 27 wherein said step of recording said decryption key and said unencrypted version of said first encrypted portion serves as evidence of contents of said electronic document.

30. (new) The method of Claim 1 wherein said recipient is supplied with a public key and a private key which serve to identify said recipient and wherein said public key is registered with said at least one third party.

31. (new) The method of Claim 7 wherein said recipient is supplied with a public key and a private key which serve to identify said recipient and wherein said public key is registered with said at least one third party.

32. (new): A method of secure communication of an electronic document from a sender to a recipient, verification of sending of the electronic document by the sender and verification of the receipt of the electronic document by a recipient, in association with at least one third party, comprising the steps of:

the sender generating a first hashed digital string based upon said electronic document and communicating said first hashed digital string to said at least one third party;

the sender communicating first and second portions of said electronic document to said at least one third party;

said at least one third party communicating said first portion to said recipient;

said at least one third party, in response to a request from said recipient, communicating to said recipient said second portion of said document and said first hashed digital string, said

request being recorded by said at least one third party as evidence of receipt of said first portion of electronic document by said recipient; and

said recipient generating a second hashed digital string based upon said first and second portions of said electronic document and comparing said first hashed digital string to said second hashed digital string.